

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: AYERS ISLAND DAM POND	Lake Area (ha): 202.34
Town: BRISTOL	Maximum depth (m): 20.4
County: Grafton	Mean depth (m): 10.5
River Basin: Merrimack	Volume (m ³): 21345000
Latitude: 43°36'02" N	Relative depth: 1.3
Longitude: 71°42'46" W	Shore configuration: ---
Elevation (ft): 450	Areal water load (m/yr): ---
Shore length (m): ---	Flushing rate (yr ⁻¹): ---
Watershed area (ha): ---	P retention coeff.: ---
% watershed ponded: ---	Lake type: artificial

BIOLOGICAL:

15 February 1997

1 August 1996

DOM. PHYTOPLANKTON (% TOTAL)	#1		DINOBRYON 75%
	#2		
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			1.83
DOM. ZOOPLANKTON (% TOTAL)	#1		KERATELLA 45%
	#2		
	#3		
ROTIFERS/LITER			
MICROCRUSTACEA/LITER			
ZOOPLANKTON ABUNDANCE (#/L)			
VASCULAR PLANT ABUNDANCE			Sparse
SECCHI DISK TRANSPARENCY (m)			2.7
BOTTOM DISSOLVED OXYGEN (mg/L)			8.2
BACTERIA (E. coli, #/100 ml)	#1		< 10
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³) : None
Anoxic volume (m³) : None

CHEMICAL:Lake: AYERS ISLAND DAM POND
Town: BRISTOL

	15 February 1997		1 August 1996		
DEPTH (m)	-99.0		6.0		13.0
pH (units)			6.6		6.3
A.N.C. (Alkalinity)			4.8		4.4
NITRATE NITROGEN					
TOTAL KJELDAHL NITROGEN					
TOTAL PHOSPHORUS			0.023		0.012
CONDUCTIVITY (μ mhos/cm)			48.2		47.3
APPARENT COLOR (cpu)			55		60
MAGNESIUM			0.05		
CALCIUM			2.8		
SODIUM			4.8		
POTASSIUM			0.56		
CHLORIDE					
SULFATE					
TN : TP					
CALCITE SATURATION INDEX			3.6		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1996

D.O. S.D. PLANT CHL TOTAL CLASS

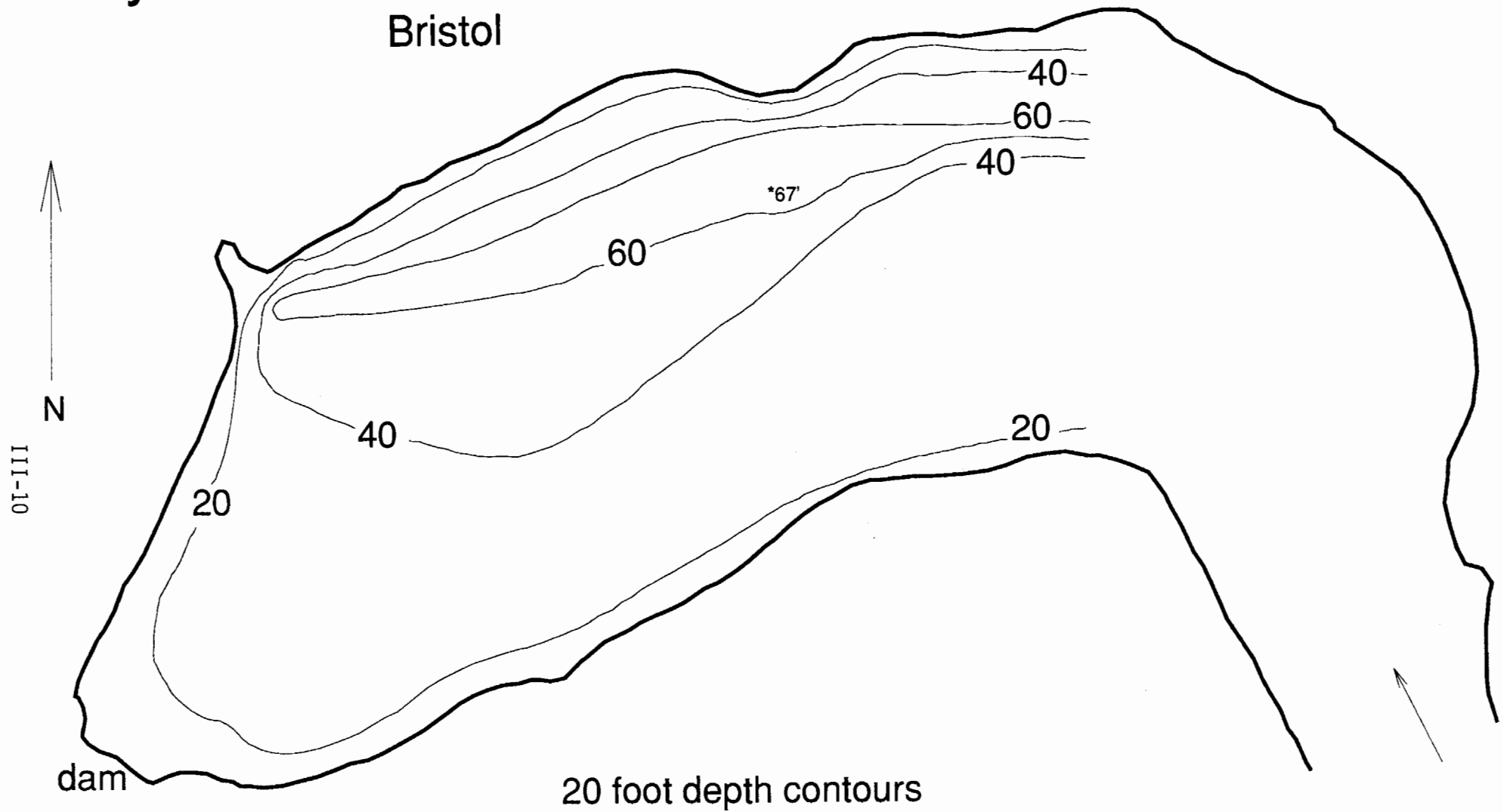
**	3	0	0	3	Oligo.
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COMMENTS:

1. This is an impoundment on the Pemigewasset River in Bristol, created by Public Service's Ayers Island hydroelectric dam.
2. No winter samples were collected due to thin ice and open water.
3. There was no thermal stratification and no dissolved oxygen depletion with depth at the time of the summer sampling. Readings were taken only to within 11 feet of the bottom, but a bottom water sample had no anoxic odor.

Ayers Island Dam Pond

Bristol



[illegible]

Ayers Island Dam Pond

Bristol



N

III-12

dam

0

0.2

Km



[illegible]